



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/888,421 | 06/26/2001 | Chung-Wang Lee | LEEC3044/EM/6927 | 9496 |

23364 7590 02/09/2005

BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314

| |
|----------|
| EXAMINER |
|----------|

CHO, HONG SOL

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2662

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

09/888,421

Applicant(s)

LEE ET AL.

Examiner

Hong Cho

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 3 and 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 1-3, 6, and 7 are objected to because of the following informality:

Re claims 1-3, 6, and 7, the claim language “capable” is not an explicit or a precise term.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1,2, 4, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubinstein et al (U.S. 6088368), hereinafter referred to as Rubinstein in view of Kawashima.

Re claims 1, 2, and 6, Rubinstein discloses an access switch connected to an end user and central office switch for the transport of Ethernet frame data over a copper infrastructure connecting a central office facility to a customer premises (*at least one NIC coupled to an end user and an exchange through a first line to control data packet transmission between each end user and said exchange for managing a transmission and a receiving of said data packet*, figure 1; column 4, lines 8-26).

Rubinstein discloses the customer premises coupled to an Ethernet NIC that will respond to test and management messages originated by any SNMP network management system (*a SNMP installed on said Ethernet switch for setting a management value of a MIB so that said Ethernet switch monitors said at least one NIC based on said management value*, column 7, lines 34-37).

Rubinstein does not teach monitoring and managing Ethernet switch by sending packet messages under monitor and management from exchange. However, it is well known in network management system that network management is generally defined to encompass network monitoring and control functions. Network monitoring is concerned with observing and analyzing the status and behavior of its network domain configuration and its devices. Network control is concerned with the altering of parameters of various configurations of the network devices and causing those components to perform predefined actions. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement network management program or protocol such as SNMP as taught by Kawashima into central office switch of Rubinstein so that access switch (*Ethernet switch*) is managed by central office switch (*exchange*, page 2, paragraph [0021-0023]).

Rubinstein does not teach writing a test result into said MIB and commanding said SNMP to collect said result for transmitting to said exchange for analysis and determination by network management personnel. However, Kawashima discloses SNMP network-device management technique for managing a plurality of nodes (*Ethernet switch*) by the network-device management station (*exchange*). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention was made to implement network management program or protocol such as SNMP as taught by Kawashima into central office switch of Rubinstein so that central switch will manage an access switch by receiving management data sent from an access switch (page 2, paragraph [0022-0023]).

Re claims 4 and 8, Rubinstein does not teach each network interface circuit being a VDSL interface circuit. However, it is well known in the art that using high-speed transmission medium is one way to improve network performance. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace Rubinstein's 10BaseT with VDSL to transmit high speed data over short reaches of twisted pair copper telephone lines (column 3, lines 36-41).

Re claim 5, Rubinstein discloses a fiber optic connection between CO switch and an access switch. Rubinstein does not teach transmitting management packet messages on a cable modem. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use cable modem between CO switch and an access switch for high speed data transmission.

Allowable Subject Matter

4. Claims 3 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement for reasons for allowance.

5. Claims 3 and 7 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose transmitting enable or disable signals to each detection loop for activation in performing a loop detection on each NIC based on the management value of MIB. It is noted that the closest prior art of record, Rubinstain shows a method of managing NICs. However, Rubinstein fails to suggest the specific use of the management value of MIB to transmit enable or disable signals to each detection loop for activation in performing a loop detection on each NIC.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - US Patent (6829252) to Lewin et al. discloses DSL access multiplexer for use with Ethernet over VDSL transport facility
 - US Patent (6680940) to Lewin et al. discloses transporting Ethernet frames over VDSL
 - US Patent (5790548) to Sistanizadeh et al. discloses universal access multimedia data network
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

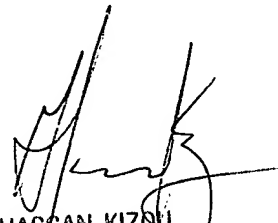
The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

Art Unit: 2662

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hong Cho
Patent Examiner
2-2-2005



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600